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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,342	05/19/2000	Jouni Rapakko	460-009420-US(PAR)	9989
7590	08/11/2005		EXAMINER	
Clarence A Green Perman & Green LLP 425 Post Road Fairfield, CT 06430			VU, TUAN A	
			ART UNIT	PAPER NUMBER
			2193	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/575,342

Applicant(s)

RAPAKKO ET AL.

Examiner

Tuan A. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20050714</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 5/23/2005.

As indicated in Applicant's response, claims 1, 7, 14-15, 21, and 28 have been amended.

Claims 1-28 are pending in the office action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shih et al., USPN: 6,405,362 (hereinafter Shih), in view of Garney, USPN: 5,319,751 (hereinafter Garney).

As per claim 1, Shih discloses a method for loading the software application from an expansion card in an electronic device (e.g. col. 3, lines 8-18), said method comprising loading, starting and executing program modules in the device;

which expansion card can be coupled in a releasable manner to the device (Fig. 1; 3);

wherein executing the loading of the expansion card application is done in 2 phases (Fig. 2, 3);

wherein the first phase includes the loading and start-up of the basic module (e.g. *event monitor* , step 300 - Fig. 2; col. 6, lines 25-37); and

the second phase includes conducting the loading and start-up of the software application module (e.g. steps 315-320 – Fig. 3) when the expansion card is coupled to the electronic device (Fig. 3);

the basic module receiving a signal about attaching the expansion card and loads the software application (Fig. 3).

But Shih does not explicitly disclose that the expansion card software application is user interface software. But Shih discloses software applications on hand held devices or user event-driven applications, each of them necessarily include user interface modules (e.g. col. 6, lines 5-32); hence has implicitly disclosed that the software application to be loaded is an user interface software.

Nor does Shih specify that said user interface software from the expansion card is divided in a basic module and a user interface module, said basic module and said user interface module being separate parts of the user interface software. The loading and activation of software from removable media being divided into a basic operating system level module and a main software module was a known concept in the art of computer booting and loading of operating system components or upgradable software. And this has been applied to software provided via removable device being coupled to host computer system targeted for the purpose to load up thereto such additional software or O.S. components. Whereas Shih uses a shell stand-alone code or thread to snoop on card insertion event, the importance of operating system or architecture diversity is evidenced (see Shih: col. 6, line 41 to col. 7, line 18) with the use of such card insertion module in order accommodate the specifics of the software to install with such diversity and compatibility of resources. Analogous to the endeavor so concerned by Shih, Garney, in a method to activate/configure a processing device with software loaded from the removable resources being attached thereon analogous to the expansion card loading by Shih, teaches the software loading being done in 2 parts, with both parts being separate components of

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the software product; the first part being a stub for setting basic operating system configuration for preparing the host machine to incorporate the second part on the software which is loading and activation the content of the software in the removable card (Fig. 6-12). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to provide a software product for such product loading method as suggested by Shih with a 2 separate parts or components just as taught by Garney just so to prepare the host target system with first software basic (Garney's stub) component to incorporate a second and main component of the software for which more resources are required and yet assure secure control and operation of the incorporation of this main software component in that less resources would be used to forestall conflicts by which more resources could be otherwise jeopardized.

As per claim 2, Shih further teaches a method wherein the first basic module controls the execution of the second phase (step 315 – Fig. 3).

As per claim 3, Shih further teaches application programming interface and device driver to arrange communication between user interface software and expansion card (Fig. 3 – Note: O.S. device driver recognition cooperating with shell or windows API for signaling an hardware insertion is implicitly disclosed); said basic module being signaled on the coupling of the expansion card from device driver for effecting the loading and start-up of the software user interface module (e.g. col. 6, line 20 to col. 8, line 32).

As per claim 4, Shih does disclose wherein coupling an expansion card to a electronic device an interrupt signal is produced with OS examination of cause therefor; and information on the coupling is transmitted to a device driver (e.g. col 7, lines 30-50 – Note: Shell notifying a

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event monitor to allocate immediate resource for handling a signal is equivalent to interrupt signal handler for addressing hot insertion of card).

As per claim 5, Shih discloses wherein the decoupling of an expansion card halts processing of a user interface module without interrupting the basic module (Fig. 2,3 – Note: event monitor is required to remain functional even if card is removed for signal removal event).

As per claim 6, Shih discloses that memory is allocated for a user interface module when said module is loaded and said memory is deallocated when an expansion card removed from an electronic device (e.g. col. 7, lines 19-23, 62-67)

As per claim 7, Shih discloses a electronic device comprising means for loading a application software in an electronic device, means for coupling an expansion card in a releasable manner in electronic device; and means for loading, starting and executing program modules in the device (Fig. 2,3); and the loading of the application being arranged to be executed when the expansion card is coupled to the device; wherein a basic module receives a signal about attaching the expansion card and loads the software application (Fig. 3).

But Shih does not explicitly disclose that the application software is an user interface software; but this limitation has been addressed in claim 1 above.

Nor does Shih disclose that the user interface software is divided in a basic module and a user interface module, said basic module and said user interface module being separate parts of the user interface software; but this limitation has been addressed in claim 1 above using Garney.

As per claims 8-9, these are the apparatus claims corresponding to the method of claims 2-3, respectively. The claims are rejected under the same arguments as cited above, with Column 2, Line 1 referencing the apparatus (information process apparatus).

As per claims 10-11, these claims represent an apparatus performing a method corresponding to the method of claims 3 and 4, hence are rejected using the same arguments as cited above in the respective claims (Fig. 3 – Note: O.S. device driver recognition cooperating with shell or windows API for signaling an hardware insertion is implicitly disclosed; col. 6, line 20 to col. 8, line 32; col 7, lines 30-50).

As per claim 12, Shih discloses communications with bus and multi-machine environment (Fig. 1); and Garney teaches that the expansion card comprises a transmitter/receiver unit and power amplifier (e.g. *device driver* - col.1, li.60 to col.2, li.4). At the time of the invention, it was a well-known concept to one of ordinary skill in the art that a power amplifier is commonly used in the output stage of a signal-producing device to isolate output impedance. Additionally, it was also well-known in the art that a driver acts as transmitter/receiver unit to control components of a specific computer resource, and that card like modem or game adapter card come with a speaker being amplified by a power amplifier. Hence if Garney (in combination with Shih) does not already provide a high frequency power amplifier at the output stage of the transmitting unit, it would have been obvious to a person of ordinary skill in the art to modify Garney's expansion card so that it does come with one such amplifier to generate audio or signal with frequencies capable of being amplified for securing distance transmission of signal or impedance matching purposes.

As per claim 13, Shih further teaches an apparatus for performing the method of claim 1 wherein the electronic device is a data processor (e.g. col. 6, lines 5-32).

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As per claim 14, Shih further teaches an storing means for performing the method of claim 1 (e.g. *memory* - col.2, li.2; Fig. 12); all of whose limitations having been addressed above in claim 1.

As per claim 15, Shih discloses a method for loading the application software of an expansion card in an electronic device, said method comprising loading, starting and executing program modules in the device;

which expansion card can be coupled in a releasable manner to the device (Fig. 1; 3);
executing the loading of the expansion card application software is done in 2 phases (Fig. 2, 3);

wherein the first phase includes the loading and start-up of the basic module (e.g. *event monitor*, step 300 - Fig. 2; col. 6, lines 25-37); and

the second phase includes conducting the loading and start-up of the software application module (e.g. steps 315-320 – Fig. 3) when the expansion card is coupled to the electronic device (Fig. 3).

Shih does not explicitly disclose optionally stopping between the first phase and the second phase, but this is implicitly disclosed because (see Fig. 3) any time the user chooses to stop the event monitor at stage 300, the user can effect an manual interruption and enable the stop between the 2 phases, i.e. alternative by user to stop the installation before it starts reads on optionally stopping.

Shih does not explicitly disclose that the software application is an user interface software; nor does Shih specify that said user interface software is divided in a basic module and

a user interface module, said basic module and said user interface module being separate parts of the user interface software. But these limitations have been addressed in claim 1 above.

As per claims 16-20, refer to respective rejections of claims 2-6.

As per claim 21, this corresponds to claim 7, hence is rejected using the corresponding rejections as set forth therein; and further recites means capable of stopping the loading between the loading of the basic module and user interface module. This limitation has been addressed in claim 15 above.

As per claims 22-27, refer to respective rejections of claims 8-13.

As per claim 28, this is a storing means version of claim 15, hence is rejected using the corresponding rejections as set forth therein, the storing means being inherent in a processing unit like the computing system as taught by Shih.

Response to Arguments

4. Applicant's arguments filed 5/23/2005 have been fully considered but they are not persuasive. Following are the Examiner's observation in regard thereto.

(A) Applicants have submitted that Shih, 'the event monitor ... does not contain, or form any part of, the application software'; and that Shih's 'actual application software is loaded in a single phase ... said software has not been divided into two modules (Appl. Rmrks, pg. 12, 2nd para). The newly added limitation enforcing that the first module (Shih's Fig. 2 - event monitor 210) and the main UI module (Application 220) are separate parts of the application would have to be considered in light of the grounds of rejection. That is, concerning the point that the event monitor by Shih is not part of the application software, this limitation has been addressed using Garney to show why it would be beneficial that a software product to be loaded to have a first

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module being installed first in order to enable the detection of card insertion of the second module and usage of the main application software therein. Shih, alone might not provide all the limitations but when combined with Garney, these happen to be obvious in view of the rationale as set forth in the rejection; against which Applicants do not appear to have provided counter-arguments that would show specifics as to why the combined teachings would yield unwanted results. The rejection has shown why by providing a module distinct from the main module to install, the endeavor as to accommodate the specifics of target computer system or different architecture machine diversity with the application software to be loaded by Shih can be enhanced by Garney, who supplies a separate module first for observing whether the target system has what it takes to be compatible to be using the application. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

(B) Applicants have submitted that Shih does not teach any part of the application software to be installed in the memory of the device when the autorun started and that Examiner has admitted that Shih does not provide a user interface software divided into a basic module and a UI module (Appl. Rmrks, pg. 12, bottom para; pg. 13, 1st para). The rejection has established this limitation as explained in section A above; for which it is required that applicant show the reasons as to why the combined teachings would impose unwanted drawbacks. The argument (Appl. Rmrks- bottom of 1st para) implying that the Examiner leads to believe that Shih is not providing the expansion card software into 2 loadable portions has no direct relation to the

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rejection as explicitly set forth; hence has no weight for not bringing a valid point in disparaging the grounds of the rejection in light of what is claimed, interpreted and clearly stated in the rejection.

(C) Applicants have submitted that Garney's actual device driver is driven without transferring it into the computer (Appl. Rmrks, pg. 13, 2nd, 3rd para). It is noted that the rationale using Garney with Shih is intended to fulfill the 2 parts of a software product being separately applied in 2 phases, i.e. the first part being the module installed first and used to check the conditions of the target system as well as detecting the insertion of the main second module; and a second part which the main software to install. The combination is mainly purported to address the limitation that Shih's expansion card software -- or UI application software as claimed-- can be divided into a basic module and a UI application module, i.e. what is recited as 'said basic module and said user interface module being separate parts of the user interface software'. The rejection has shown exactly the motivation for Shih's 2 phases (Fig. 2) to additionally provide the structuring of the application software into a main software application/module and an initial software module (or initialization *stub* as taught by Garney) so that the main part of the application can thereafter (second phase) be installed under the regulative execution of such initial module (first phase) which has been installed in the first place. The rationale in the rejection is specifically addressing the limitation of partitioning Shih's expansion card content into an initial module and a main module (or separate parts of the UI software); not trying to meet the requirement of the main software module (the UI module) to be loaded and executed; this limitation believed to have been met by Shih as shown in the claim 1 rejection. Applicants fail to show specifics as to why the combination as set forth would generate adverse effects or

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would not generate a good chance of success; and this has been pointed in section A above.

Besides, Garney's executing of software driver as from the insertable disc/card although not showing installing of such driver into the PC registry but the mere fact of executing an application by the PC using a driver software implies the execution engine of the computer to load sufficient code or data from the source media (or insertable card) into the memory for the application to be run. Hence, some level of loading into the machine memory is taught. In other words, the claim for only reciting loading of user interface module is not providing unequivocal requirements that the software module from the insertable card is first transferred into the computer to be installed thereon --as being stored in memory and registry; then loaded up in fast RAM for execution or activation. The mere reciting of 'loading and start-up of the user interface module' or 'loads the user interface module' reads on the execution by Garney wherein some level of memory loading is evident; hence making the claimed *loading/start-up* not so distinguishable from Garney's loading of code for execution. However, as mentioned above, Garney is not brought in fulfill the installing or activating of software from the inserted card but only to show that the application software can be separated into a initiation or basic module and a main module, each loaded in a distinct phase. It is also noted, that when the claim only recites 'the second phase includes conducting the loading and start-up ...', the claim does not make it clear that the module being loaded for start-up necessarily comes from the expansion card (Note: there is no clear reciting in the claim that at the time of loading, the second module is resident inside the expansion card) because as interpreted such UI module can come from any source, media, remote devices, or the target PC itself, with the mere concept of loading covering the act of loading some data into runtime memory. Hence the loading for startup as claimed does not

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amount to a code being transferred from a card into a PC for installation but only means that some code is being loaded into memory from a unclear source. And Garney by executing code from the target computer does read on such interpretation.

Thus, the rejection will stand rejected as set forth.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571)272-3719.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence – please consult Examiner before


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using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VAT
August 2, 2005



ANIL KHATRI
PRIMARY EXAMINER